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## (54) SOFT MAGNETIC FILM

(57) Abstract:

PURPOSE: To provide a soft magnetic film, which has a large saturation magnetic flux density, has a superior soft magnetism and a heat resistance and can improve productivity.

CONSTITUTION: The composition in a soft magnetic film is expressed by a general formula which is a formula  $\text{Co}_x\text{M}_v\text{L}_z\text{N}_v\text{O}_w$  (in the formula Co represents cobalt, M

stands for the element of at least one kind of Fe and Ni, L stands for the element of at least one kind of Nb, Zr, Ta, Hf, Y, No, W, Cr, Ti, Si, Al, Sn, Ga and Ge, N and O respectively for nitrogen and oxygen and x, y, z, v, and w), respectively for the ratios of each element in atomic % and the composition range is set on the conditions of 602x294, 02y210, 32z220, 32v220 and 0.12w21.

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